

FSB Role Description – FSW Systems Engineer (SE)

Roles & Responsibilities

- FSW systems engineering within the scope of a FSW PDT; or in direct support to an external Project development organization.
- Reports directly to the FSW PDL; or to a FSW Systems Manager (separate role description) who is assigned directly to a Project organization.
- Performs, contributes to, initiates and leads technical trades, studies, analyses and evaluations that need clear definition and resolution in order to acquire consistent agreement of technical issues associated with a FSW development life-cycle effort. Prepares and presents comprehensive technical materials to characterize differing opinions/options. Makes technically sound recommendations and ensures that negotiated results are exhaustively communicated to, and documented for, all participants and relevant PDT staff.
- Assists in development of mission data flows and operations concepts with a focus on flight hardware requirements, flight interfaces, ground interfaces and functional/performance FSW requirements.
- Provides end-to-end systems engineering across the entire range of FSW elements and interfaces.
- Assesses whether FSW and dependent products are being completed in a coordinated manner that will converge appropriately at mission I&T milestones.
- Influences the ground system capabilities, interfaces and schedules to facilitate FSW team productivity.
- Ensures that the FSW test environments are appropriately defined and negotiated in terms of fidelity for development testing, requirements verification testing, systems/acceptance test and on-orbit FSW maintenance.
- Follows and advocates FSW Branch standards and guidelines.
- Provides recommendations to the FSW Branch Standards CCB regarding desired improvements to approved and draft FSW Branch practices. Identifies the need for new standards and processes.
- Major contributor during development and maintenance of the Project level FSW Subsystem Requirements documentation, in conjunction with other Project staff and FSW Product Development Leads. Ensures that the derived detailed FSW requirements are traceable to parent documents.
- May be responsible for development and maintenance of the detailed FSW requirements documentation for a PDT. In this context the accuracy, clarity and completeness of the FSW requirements is driven by the intent to achieve unambiguous FSW requirements communications among FSW developers, testers and stakeholders.
- Ensures rigorous maintenance and controls of all FSW requirements documentation.
- Identifies risks that could impact FSW from any area of the Project. Recommends risk avoidance and mitigations. Works with the PDL and/or other Project management and external subsystem organizations as necessary to minimize risks to the FSW products, costs and schedules.
- Provides formal status and risk reports at least monthly to the PDL and/or the Project. Reports risks and status to the PDL (for reporting to FSB) even when Project decisions to accept risks have been made.
- Ensures that a full history of technical trades/studies/evaluations and recommendations is maintained and archived throughout the FSW development life-cycle.

-
- Responsible for FSW content of relevant RFPs associated with a mission (e.g., spacecraft RFP, instrument RFP).
 - Provides recommendations to the FSW Branch Standards CCB regarding desired improvements to approved and draft FSW Branch standards and processes. Identifies the need for new FSW development, test, operations, and maintenance standards and processes.
-

**Ownership and
Approval
Authority**

The FSW Branch Head is the owner of this role description. The FSB Standards CCB has approval authority.

**Change
History**

Version	Date	Change
1.1	06/30/06	DCR #176.
1.0	02/17/06	Initial draft.